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THE

OLD VENETIAN "BLEEDING-GLASS,"

BY

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OLD VENETIAN "BLEEDING-GLASS."^a



THE specimen which forms the text of the present communication was picked up by me in the course of a recent tour in Italy. I had got as far as Rome, having originally intended to proceed further south, and gratify my curiosity by "doing" Naples, Vesuvius, and the classic localities of Sicily. However, I was then far from strong. I was merely recovering from a prolonged illness, a result for which I have to thank (under Providence) the attentions of my old and valued friends, Dr. Samuel Gordon, the worthy President of the Royal Academy of Medicine, and Mr. Wheeler, to whose skill and care I can confidently commend any of my acquaintances who are similarly afflicted in body. In my depressed condition I happened to recollect Coleridge's bitter comment on the then state of Sicily—that "the only advantages the Government had conveyed into that garden of delights were three—itch, pox, and famine;" and, although I might with moderate care have hoped to escape the contagion of any of these plagues, yet the bare idea of their prevalence, occurring in a moment of such doubt, quite decided me. So I altered my chart, partially retraced my steps, and—in language descriptive of the movements of patriarchal tourists—I "turned aside unto" Venice. At one of the largest manufacturing warehouses of this unique city I possessed myself of the specimen which I have the honour to exhibit to the Medical Section. It had been exposed for sale by one of the factory people.

^a "Note on a Specimen of the old Venetian 'Bleeding-glass,'" read in the Medical Section of the Royal Academy of Medicine in Ireland, May 17th, 1889.

It had for centuries been the family bleeding-glass of a noble Venetian house (the Counts Caldana) long since reduced in circumstances by revolutionary changes of property and station. Formerly, the higher Italian families, especially the Venetian, had each its bleeding-glass, which was transmitted from sire to son as an heir-loom. They were tastefully manufactured, as one would expect under such circumstances, and as the present specimen testifies. No attempt at graduation was known in the days of the production of these bleeding-glasses. One or two "fills" would, I dare say, represent a fair dose of the vital fluid for abstraction, and the practitioner who was accustomed to the daily (or hourly) use of such measures would probably be of the mode of thinking of the great Scotch physicist on the introduction of the metric system :—

Some talk of millimetres and some of kilogrammes,
And some of decimetres, to measure beer in drams ;
But I'm a British workman, too old to go to school,
So by pounds I'll eat, and by quarts I'll drink, and I'll work with my
three-foot rule.

The specimen has evidently been carefully preserved, and presents few marks of usage, beyond some transverse striations on the inside ; which have obviously been produced by hard rubbing. As transparency was, of course, desirable, it does not possess the opaque coloured staining, and spangled textural ornamentation, which distinguish the more characteristic vitreous manufactures of Venice—the secret of whose preparation was derived from the Arabs, improved upon by the "super-subtle" inhabitants of the sea-born city, and preserved by inquisitorial legislation during the palmy days of its prosperity, when it was quite as much as a republican's life was worth to be even remotely suspected of betraying it to the outer barbarian.

One easily conjures up feelings closely bordering on the poetic while reflecting how much of the noble blood of Italy must have passed in and out of this modest vessel. A single filling does not represent an extensive hæmorrhage. I have carefully measured its capacity, with the assistance of my accomplished friend Mr. Francis

Heron, of the chemical laboratory, Royal College of Surgeons, and find that it represents 440 cubic centimetres. But when we recollect that the Italians, in extravagance of blood-letting, surpassed most other nations even in the primrose days of phlebotomy, and read the records of such cases as that of Guy Patin who treated one of his colleagues to 32 successive bleedings to check the progress of a continued fever, and sealed his faith with his own blood, to the extent of seven similar operations, for the purpose of relieving a severe cold in the head, we gradually come to develop a more exalted idea of the importance of so simple an adjunct to what is now classed among the minor operations. We know that in order to obtain its full effects, bleeding was usually carried to fainting, and various quantities of blood had, of course, to be extracted in order to produce so pronounced a result, according to the constitution of the patient, and the nature of the disease. My friend, Professor Rawdon Macnamara, has informed me that on one occasion he bled a patient of the late Mr. William Henry Porter's to the extent of 40 ounces, when carrying out, as dresser in the Meath Hospital, the directions of that distinguished surgeon in the treatment of thoracic aneurysm. Yet that patient did not faint! In such special instances the bleeding-glass would have to be emptied even more than twice. It would have been obviously undesirable to make it much wider, and increased depth would have made it still more awkward for clinical use. I have no doubt, however, that if hospital teaching had reached the advanced degree of refinement which it now possesses, it would have been considered desirable to draw the blood into a tall and narrow glass vessel, for the purpose of studying its properties and aiding in class demonstration. A convivial corporation formerly existed in England (I do not know whether it still survives), the ordeal of initiation to which consisted in swearing fealty to that body and drinking a yard of wine—*i.e.*, imbibing the vinous contents of a vessel of the length of the imperial yard measure. The breadth of this receptacle has not, so far as I know, been published; still it would be the more important magnitude to the party chiefly concerned, as that of the road is said to be to the pedestrian who has recently been

practising similar alcoholic gymnastics. From such records, and from the practice of modern scientists, we gather that where an impressive demonstration is required, elongation of the reservoir may be an important factor; while I think most of my hearers will agree with me that, for convenient use at the bedside, the shape adopted by the manufacturer of the present specimen is much to be preferred.

We know that bleeding, as a remedial measure, was employed long before the time of Hippocrates; was extensively practised and highly advocated by the great "Father of Medicine" himself; still more praised by Celsus, and in a superlative degree by Galen. The latter may even be regarded as the great apostle of venesection to successive ages—down to comparatively recent times. He boasted of bleeding at all times and seasons, winter and summer, by night as well as by day. Still he used more moderation in his practice than did the French physicians of the first half of the present century, whose *hæmatomania* was vigorously denounced (as well as baptised) by Schneider. He seldom bled old persons, never bled infants under four years, and laid down some formulæ as to the amounts to be extracted—at intermediate ages, and under special conditions. When we read in the annals of the doings of medical men before the days of the anti-venesection movement, of the *saignées—répétées*, "*à outrance*," "*a blanc*," "*coup-sur-coup*," followed by starvation and violent purgation; while, on the surgical side of the house, the victim of a bad dislocation, or of a strangulated hernia, was prepared for its reduction by bleeding to syncope, aided by tobacco enemas and full doses of tartar emetic, we picture to ourselves many patients reduced to a condition almost as deplorable as those whose abdominal or cranial cavities have been subjected to the enterprise of the advanced surgeon of the present day.

To return to the specimen before us. It gives a special interest to this otherwise unobtrusive-looking glass vessel to recollect that it formed, on so many critical occasions, a receptacle for some of the noblest blood of one of the most remarkable communities which our world has yet seen. We know that Venice formed a foremost factor

in the commerce of the world, and had reached the highest (then) attainable level in art, science, and culture of every kind, at a date when the representatives of the house of Este, whose descendants—direct or indirect—now occupy most of the thrones of Europe, were agitating for extension of personal influence among the republics of Northern Italy with the various ways and means of espionage, of brigandage, of secret poisoning, and of open assassination; and backed by a personal following which would be insufficient to secure the return of an Irish member of Parliament at the present day. I am not, however, aware that any physical peculiarities distinguish the blood of the descendants of the domineering founders of the Venetian—or even Roman—republic. Recent chemical and microscopical researches do not confirm the ideas of poets and mountebanks of the existence of a chromatic scale of the various bloods—from the noblest and bravest which was supposed to have its crimson modified by an imperial tinge of purple, down to that of the craven Lord Angelo whose “internal medium” corresponded to very snow-broth. The illustrious author of Robinson Crusoe, in a storm of fierce indignation, described his English fellow-countrymen as formed of the “mud of all the nations.” The erudite Bauer, with the crushing severity of a theologian, said that his utmost hope of the functions of his German compatriots in the progress of humanity, was, that they would form a useful manure to the other races. Still, we have had each of these peoples, since the date of the respective pronouncements above referred to, claiming for themselves the foremost positions for rank and descent among the nations of the earth.

However, in those good old times human blood was too rapidly drawn to be carefully examined; and from the records preserved to us, it may, I think, be questioned whether the Italian warrior of the period, or the surgical practitioner, had the honour of abstracting the greater quantity of the vital fluid from the circulation of his fellow-men.

In the latter part of the sixteenth century, the Piedmontese Botal (who has given his name to the ductus arteriosus, and the foramen ovale of foetal anatomy), preached freedom of bleeding

with an enthusiastic zeal to which I know of no parallel in the history of therapeutics, excepting, perhaps, the classical advocacy of the uses of tar-water by Bishop Berkeley. In either sex, in the young and the old, and in all types of disease—from the most acute down to the most asthenic—he advocated large and repeated bleedings. "The young he bled freely on account of the rapid reproduction of blood in youth; the old because he saw in the practice a conduciveness to rejuvenescence. He bled freely in low and wasting diseases, even of a malignant nature, because richer and better blood was formed; in dysentery, because he recognised in it an affinity to inflammation of the lungs, in which all physicians bled; in all forms of flatulency, because of its power to relieve obstructions; in short, he had a reason for bleeding in every special distemper; and, when reproached for the indiscriminate routine of his practice, he argued that the more water you draw from a well the purer and better is that which filters in." He also originated the unique procedure of systematic bleeding in pregnancy. Such heroic treatment led to the natural result of a strong opposition in some quarters. Van Helmont, the famous alchemist, idealist, and mystic, was one of the most important of the sceptics in the matter of this article of medical doctrine. He became utterly disgusted with the practice of his *confrères*, because they failed to cure him of the itch, which he had accidentally contracted from a young lady affected with that disagreeable complaint. The treatment had consisted in bleeding and purging him, almost to death's door, as the phenomena of the disease were attributed by the pathologists of that period to a combustion of the bile, co-operating with a saline condition of the phlegm. He was, however, fortunate enough to fall soon afterwards into the hands of Paracelsus, then the most prominent practitioner of Europe, although he never drove a carriage of his own.

The latter was a bold innovator, and originated independent pathological doctrines. He adopted the views of Basil Valentine, who had taught his disciples that all bodies are composed of three elements—salt, sulphur, and mercury. To the first he assigned the material consistence of the body, to the second its growth and

animal heat, to the third the conservation of its fluids. All morbid processes he attributed to certain chemical operations—induced by certain mysterious *entities*—each of which produced either the effervescence of the salt, the combustion of the sulphur, or the coagulation of the mercury. In the use of sulphur and mercury to supply the place of these portions which had lost their functional activity by combustion and coagulation respectively, he certainly did choose—whether by lucky accident or not, it is impossible to say—two of the most powerful levers which he could have employed in the surgical practice of his time. Syphilis and scabies appear to have been the special plagues of the upper strata of civilised society in those days; and, indeed, the former is said to have spread—in the virulent type which appeared immediately after the discovery of the New World—from court to court of the kingdoms of Europe with a telegraphic velocity of transit which could hardly be surpassed even in this our own electric age. We are now in a position to estimate the value of the bleeding-purging-and-starving treatment of either of these diseases, and it is but due to the memory of Paracelsus, audacious charlatan as he was, to give him the credit of having made an advance, the importance of which can hardly be over-rated, on the practice of his predecessors and contemporaries. His treatment of Van Helmont was so successful that the latter returned to the practice of medicine, which he had thrown up in a paroxysm of unbelief and disgust, and became so vigorous in the pursuit thereof that his personal and professional qualities were thus summed up after his death by his biographer, Lobkowitz:—"He was pious, learned, famous, a sworn enemy of Galen and Aristotle. The sick never languished long under his hands, being always killed or cured in three days." I need hardly add that he had become a convert to phlebotomy.

In such times, when venesection formed the great key-stone of treatment, princely and peasant blood fared very much alike at the hands of the busy practitioner. In the country parts of Ireland, even in my own boyhood, the rural bleeder frequently officiated. The usual fee was a shilling and a glass of "poteen." The prac-

tice was, however, then rapidly dying out, as prosecutions had followed in some instances; but I have heard the older country farmers speak, in terms of deepest regret, of the days when every strong labourer prepared himself at the close of winter (which was always devoted to idleness and fun) for the farming operations of the spring season by being once or twice "heavily blooded;" which operation was, in its turn, invariably followed by two or three consecutive purgings with Epsom or Glauber's salt. Indeed, the disuse of bleeding, and the failure of the potato crop, which occurred about the same time, were classed together as the prime factors in the physical deterioration of the Irish people, as well as in the decadence of Irish prosperity. It was regarded as the unfailing cure—when employed without delay—as well as the best preventive of, "plurrisy," the vernacular term for the *fever of (physical) over-exertion*, whose course and symptoms I had the honour briefly to describe, and whose etiology I attempted to explain, before a meeting of the members of this Section in the early part of its last session. I found, on that occasion, that the condition in question was new to the Royal Academy of Medicine in Ireland, as there represented; yet, the word calls up as definite an idea in many Irish country districts as does the familiar ones of *headache* or *toothache*, and represents one of the most terrible scourges which can visit the cottage of the peasant farmer or farm labourer. Attacking, as it almost always does, the responsible male member of the household—the father of a numerous and weakly family, or the son on whom his widowed mother and orphan sisters depend for daily bread—he yields to the onset for a few days, when a partial feeling of returning health encourages him to make a desperate effort to resume his employment, the persistence in which, under such conditions, throws him into a state of hopeless marasmus, from which, I believe, recovery never takes place.

By the ardent apostles of phlebotomy it was employed to fulfil indications of three distinct classes:—(1.) To diminish the actual mass of blood, *saignée evacuatrice*. (2.) To diminish turgescence in any particular organ—*saignée derivative*, when a vessel was opened near the organ affected; *saignée revulsive*, when the operation

was performed at a distance. (3.) To diminish the proportion of corpuscles in the blood, *saignée spoliative*.

The pure physiologist of the present day will be found to sneer at the use of bleeding as a remedy for the conditions accompanied by excessive vascular tension, &c., because he has found that it produces no appreciable fall of blood pressure till the amount withdrawn from the circulation has become so great that life is directly endangered by the operation. Thus reads the kymographic tracing. Such are the results he has obtained by fixing down a dog, or cat, or rabbit, in the most convenient position for his operation, and placing the interior of one large vessel in communication with a mercurial manometer, while blood is abstracted from another. But I would like to persuade the scientist who pins his faith to such an interpretation, that the effect of a cut head—or even a barked shin, or scratched finger—on the arterial tension in the human animal, is often very pronounced indeed; and requires neither kymograph nor sphygmograph to demonstrate it, even when accompanied by no danger to life whatever. Some of us have had personal experience of such.

Accordingly, although I have no faith in the possible merits of “evacuative” or “spoliative” phlebotomy, I venture to express a belief in the useful results to be hoped for from the “derivative” or “revulsive” variety. For the relief of acute inflammation in the very early stage, before the elasticity of the capillary walls has been wholly lost, and before the stasis has spread over too large an area, I should expect more tangible beneficial results than from all the other recognised remedial measures put together. By relieving the pressure *a tergo*—here I crave the pardon of my friends, the scientific physiologists—it diminishes the exudation of plasma, and as a direct consequence, the cellular activity of the interstitial tissue; it thus affords an opportunity for re-absorption; and allows the capillaries to contract, and regain their partially lost elasticity. These results I believe to be quite obtainable in the early stages of most cases of acute non-specific inflammation, and many a blind eye and stiff joint might have been saved to the owner if suggestions such as these had been utilised. It is only in such conditions

that I would think of discussing its utility. I do not, of course, expect all my hearers to agree with me, but if I could succeed in inducing some of the members of the Medical Section to re-consider the present position of bleeding as a remedial procedure, I would, hereafter, have the gratification of believing that my pilgrimage to Venice was followed by beneficial results to the public health, as it certainly has been to mine.

